

**Respiratory Care Services
John Dempsey Hospital
Policy and Procedure Manual**

Subject: Oxygen Therapy

Rationale: Oxygen therapy is the administration of oxygen at concentrations greater than ambient air to:

- Treat or prevent hypoxemia
- Decrease work of breathing
- Decrease myocardial work

Indications:

1. Documented hypoxemia
 - a. In adults, children and infants > 28 days old, PaO₂ < 60 torr or SaO₂ < 90% breathing room air or PaO₂ and/or SaO₂ below desirable range for specific clinical situation.
 - b. In neonates or infants < 28 days old, a PaO₂ <50 torr and/or SaO₂ <88% or PCO₂ < 40 torr
2. Suspected hypoxemia in an acute care situation
 - a. Verification of hypoxemia should follow after initiation of therapy
3. Severe trauma
4. Acute myocardial infarction
5. Short term therapy as in post anesthesia recovery

Assessment of Need:

Determined by the measurement of oxygen tensions (PaO₂) and/or saturations (SaO₂), by invasive (ABG) or non-invasive (pulse oximetry) methods as well as the presence of clinical indications previously described

Contraindications: No specific contraindications

Precautions:

1. PaO₂ > or = 60: ventilatory depression may occur in spontaneously breathing patients with elevated PaCO₂

2. $FIO_2 > \text{ or } = \text{ to } 50\%$: absorption atelectasis, O_2 toxicity and/or depression of ciliary and/or leukocytic function may occur

Subject: Oxygen Therapy

Page 2 of 2

3. Newborns:

- a. In premature infants $PaO_2 > 80$ torr should be avoided because of the possibility of retinopathy of prematurity
- b. Increased PaO_2 can contribute to the closure or constriction of the ductus arteriosus

Equipment: Appropriate O_2 Delivery Device

Procedure: Refer to *Oxygen Therapy Protocol* for all non-mechanically ventilated patients.

Issued: 4/25/94

Revised: 11/05